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EXAMINER

CHERVINSKY, BORIS LEO

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 10/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/074,336

Applicant(s)

YAMAZAKI ET AL.

Examiner

Boris L. Chervinsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Specification***

1. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are too numerous to mention. The specification appears to be a literal translation into English from a foreign document and replete with grammatical and idiomatic errors. Some terms and recitations are incomprehensible and/ or insufficiently defined, e.g. "channel 14 is formed in a mesh" as in the description and as in claims 1-3 and 37-42; "a medium poured in all or part of sections of the channel, for increasing capillary attraction acting on the heat medium in the channel" as in claims 22-24.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

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5. The terminology of the claims lacks antecedent basis with the terminology of the disclosure, e.g. " the ingredients", "the contracted pillar", "the fringing part" etc., and there is a lack of antecedent basis for several terms or recitations in the claims that is too numerous to mention.

***Claim Rejections - 35 USC § 102***

The claims in following paragraphs are considered on their merits as best understood.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United

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States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. Claims 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17, 25, 26, 28, 29, 31, 32, 34, 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Romero et al.

Romero discloses a thermal diffuser structure 10 comprising a plate shaped structure 51 having a wall 11 and being bonded to an electronic component 58 and thermally coupled to the component, a plurality of protrusions are surrounded by the wall forming channels, heat medium confined and circulates in the structure, the diffuser having a heat medium injection path 13 formed in the wall, the channels are formed more densely in the area where heat generating components are located and formed uniformly in the area distant from the components, the protrusions are large enough to form the channels on the top of the diffuser and having "partly contracted pillar" or "wage" shape, a member 40 is used to fasten thermal diffuser to the electronic component and holes 15 are made in protrusions to couple the thermal diffuser with the case.

8. Claims 3, 6, 9, 12, 15, 18, 21, 24, 30, 33, 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Snyder et al.

Snyder discloses a thermal diffuser comprising a frame 21 integrally formed with case of an electronic component 21a, 21b, a plurality of protrusions disposed on the inner wall of the frame forming a channel, cooling medium circulates inside the frame, an injection path provided to inject the cooling fluid into the frame, the density of the protrusions is higher in close proximity to the heat generating device and uniform at the distal end from that device, the protrusions are large enough to form the channels on the top of the

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diffuser and having "partly contracted pillar" or "wage" shape, capillary flow of cooling medium facilitated.

9. Claims 37, 38 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by DiGiacomo et al.

DiGiacomo discloses a radiator comprising a thermal diffuser having a plate-shaped structure or housing coupled with the case of an electronic component 23, a plurality of protrusions extending from an inner wall of the housing forming a channel, a cooling medium is confined in the housing and radiating member 58 coupled with an outer wall of the housing.

10. Claims 39 and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Snyder et al.

Snyder discloses a radiator comprising thermal diffuser including a frame 21 integrally formed with case of an electronic component 21a, 21b, a plurality of protrusions disposed on the inner wall of the frame forming a channel, cooling medium circulates inside the frame, a radiating member 21b thermally coupled to an outer wall of the frame.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. Claims 19, 20, 22, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Romero et al. in view of DiGiacomo et al.

Romero discloses the claimed invention, as applied to claims 1 and 2, except having capillary flow of the cooling medium. DiGiacomo discloses the thermal diffuser utilizing the capillary flow. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the capillary flow as disclosed by DiGiacomo in the structure disclosed by Romero to provide self-contained cooling arrangement.

13. Claims 3 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiGiacomo et al.

DiGiacomo discloses the claimed invention except having holes in all or part of the plurality of protrusions for coupling the diffuser to the component. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have holes in the protrusions to accommodate O-rings 46 in order to couple and seal the diffuser on the component.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boris L. Chervinsky whose telephone number is 703-308-5429. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on 703-308-4815. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

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872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-5115.

**BORIS CHÉRVINSKY**  
**PRIMARY EXAMINER**

A handwritten signature in cursive script, appearing to read "Boris Chervinsky", written in dark ink.

October 24, 2002